

JOINT SUPPRESSION OF ENEMY AIR DEFENSES (JSEAD)



Joint Test and Evaluation Program

Authorized Manning:	22
Total JT&E Budget (TY\$):	\$18.6M
Charter Date:	3QFY96
Completion Date:	2QFY00

Lead Service

Air Force

JT&E DESCRIPTION & CONTRIBUTION TO JOINT VISION 2010

The Joint Suppression of Enemy Air Defenses (JSEAD) Joint Test and Evaluation (JT&E) is chartered by OSD to characterize the reactive (localized) JSEAD targeting process, baseline current capabilities, quantify element contributions to that process, identify deficiencies, and test and evaluate potential improvements. Two enhancements emerged as having the most impact on this process:

1. The potential for enhanced intelligence, surveillance, and reconnaissance (ISR) to improve the timeliness, accuracy, and completeness of information provided for localized, reactive JSEAD decision making.
2. The potential for enhanced information use and targeting processes in the Joint Air Operations Center (JAOC) to improve the use of information within the JAOC by decision makers.

The Joint Test Force (JTF) identified no single existing exercise or activity that provides the capability to test both ISR and JAOC processes in a single test venue. Consequently, the multi-Service Blue Flag exercise at Hurlburt Field, FL was chosen to assess JAOC command and control processes. Additionally, the Air Force Green Flag exercise at Nellis AFB, NV was selected as the best available test site for assessing ISR. A total of four field tests will be conducted between the two sites. The JT&E will

result in recommendations for improving the end-to-end reactive, localized JSEAD effectiveness of U.S. forces and reducing enemy integrated air defense system (IADS) capabilities.

This JT&E is designed to support the development and test and evaluation of systems with the mission of *precision engagement*. In addition, end-to-end engagement capability of Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C⁴ISR) systems supports *dominant maneuver* and the electronic warfare systems supports *full-dimensional protection*.

BACKGROUND INFORMATION

Warfighting commanders require the capability to conduct effective JSEAD operations to sever an enemy's IADS by targeting key command and control and air defense assets. JSEAD operations apply preplanned (preemptive) and opportune (reactive) targeting, whereby commanders employ both destructive (seek out and destroy) and disruptive (temporarily deny, degrade, deceive, delay or neutralize) force application methods. Since the Gulf War, the JSEAD strategy has emphasized preemptive targeting and destructive force application methods. However, the surface-to-air missile threat is becoming more technologically sophisticated and mobile, and therefore more difficult to target preemptively. With fewer traditional JSEAD assets to perform reactive JSEAD in this increasingly hostile air defense environment, there is a need to improve the Joint Force Commander's ability to conduct reactive JSEAD more effectively and efficiently using existing Service assets.

On June 8, 1995, the Senior Advisory Council recommended JSEAD as the first priority for an OSD sponsored Joint Feasibility Study (JFS). The JFS was conducted at Nellis AFB from July 1995-September 1996. With inputs from Joint and Service working groups, Technical Advisory Groups, and the General Officer Steering Committee, JFS recommended a JT&E focused on near-term improvements to the end-to-end reactive, localized JSEAD targeting process. In September 1996, OSD chartered JSEAD JT&E.

The JSEAD JTF has a total of four field tests. Two tests are live-fly exercises (LIVEX) employing Air Force Red Flag resources and Nellis Range facilities at Nellis AFB during the conduct of the Green Flag Exercises. The other two are computer-assisted exercises (CAX) at the Air Force Battlestaff Training School at Hurlburt Field, FL. Each test includes an initial set of trials to establish a baseline for evaluation of the associated test issue, and a second set of trials to allow measurement of enhancement impacts.

The LIVEX is part of the Air Force sponsored Green Flag exercises. These trials provide an operationally realistic environment for establishing and characterizing an ISR baseline and measuring the impact of recommended enhancements on information timeliness, accuracy, and completeness. Multi-Service participation, including U.S. Army Apache helicopters, U.S. Navy strike and intelligence aircraft, U.S. Air Force strike and intelligence aircraft, and national intelligence sensors, are integrated into this exercise to provide a true cross-discipline, cross-platform intelligence architecture and joint force test of JSEAD concepts. LIVEX operates within a tactical-level vignette.

The CAX is conducted as an extension of a multi-Service Joint Force Air Component Commander's battlestaff planning exercise (Blue Flag). The exercise allows the Joint Test Force to characterize and perform measurements of JSEAD related information management, battlespace awareness tools, and time-sensitive targeting processes in a functioning JAOC under both baseline and enhanced conditions. CAX operates under a theater-level vignette.

TEST & EVALUATION ACTIVITY

During 1999, JSEAD completed the detailed analysis of 1998 test results and planned for the final two test events, Computer-Assisted Exercise 99 (CAX 99) and Live-Fly Exercise (LIVEX 99). However, both tests were cancelled at the last minute due to real world commitments and increased OPTEMPO. Cancellation of these tests precluded completion of JT&E as originally chartered. As a result, the JT&E investigated available options for successful completion of the program and presented them to the Senior Advisory Council (SAC) in June. The ongoing experiences in the Balkans, when combined with the detailed 98 test results, clearly attested to the need to continue JT&E through charter completion. The SAC rated JT&E as its top priority and approved an extension to September 2001 to allow for completion of a final LIVEX in August/September 2000. Following the extension approval, the JT&E completely revised the Program Test Plan and Data Management and Analysis Plan to reflect the resultant program level changes. An OSD Interim Program Review and two General Officer Steering Committee meetings were also completed to ensure that JT&E was properly focused and in touch with Warfighter needs. Additionally, an Interim Report was published and a highly successful Data Management Exercise was completed in conjunction with the USAF Weapons School Mission Employment exercise as a risk reduction rehearsal for LIVEX 2000.

TEST & EVALUATION ASSESSMENT

The first of two CAX tests (CAX 98) was conducted from March 1-8, 1998, and focused on time-critical targeting processes within JAOC. Twelve test trials were conducted. By using an approved Southwest Asia scenario with personnel from CENTCOM, CENTAF, ARCENT, and NAVCENT, the test was able to effectively emulate JSEAD related functionality of a JAOC operating on a theater conflict scale. The test is designed to characterize and measure enhancements in information management, battlespace awareness tools, and time-sensitive targeting processes. While data are currently undergoing trial reconstruction and analysis, the collection process was viewed as fully successful and demonstrated the feasibility of combining both testing and training venues within a Blue Flag type facility.

The first LIVEX test (LIVEX 98) was conducted from April 20-May 1, 1998. The test was conducted in an operationally realistic environment for characterizing ISR baseline and measuring the impact of ISR enhancements on information timeliness and accuracy. The data are currently undergoing trial reconstruction and analysis. Preliminary analysis indicates that the data will provide useful inputs to better shape future test activities.

By leveraging ongoing operational exercises (Blue Flag and Green Flag.), this JT&E is avoiding costs otherwise associated with a fully dedicated test program.

